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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/517,270	01/11/2006	Jean-Francois Sassi	RN02073	4323
7590 Jean-Louis Scugnet Rhodia Inc 259 Prospect Plains Road CN 7500 Cranbury, NJ 08512				
EXAMINER				
HAMMER, KATIE L				
ART UNIT		PAPER NUMBER		
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**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

### Office Action Summary

**Application No.**

10/517,270

**Applicant(s)**

SASSI ET AL.

**Examiner**

KATIE HAMMER

**Art Unit**

4131

**Period for Reply** -- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 11 January 2006.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 18-36 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 18-36 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO/CDC)
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date: \_\_\_\_\_
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: \_\_\_\_\_
- Paper No(s)/Mail Date: \_\_\_\_\_

**DETAILED ACTION**

***Claim Rejections - 35 USC § 112***

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claims 24 and 25 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claims 24 and 25 are dependent claims "according to Claim 18." There is insufficient antecedent basis for this dependency in the claim since claim 18 makes no mention of A', A", B', or B" functional groups. The claims should be corrected to say "according to Claim 20."

***Claim Rejections - 35 USC § 102***

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 18-20 and 24-36 are rejected under 35 U.S.C. 102(b) as being anticipated by Convents et al. (US Patent 5,872,093).

Convents et al. teaches a detergent composition comprised of dendritic macromolecules formed by reiterative reaction sequences from smaller molecules

(column 1, lines 56-67). The preferred dendrimers are spherical shaped macromolecules having a diaminobutane (DAB) core branching at each nitrogen atom with two  $\omega$ -amino-propyl groups, also repeatedly branched, with an overall molecular weight of at least 3000 (column 2, lines 1-12) which anticipates the dendrimer recited in claims 18-20 and 30. Convents et al. discloses a theoretical molecular weight dendrimer of 7166 in the Examples of column 6, which anticipates instant claim 30. This DAB dendrimer is a species in the genus of instant claims 18 and 20 dendrimer or hyperbranched polymer composition.

Regarding claim 31, Convents et al. teaches that the dendrimer constitutes from 0.1 to 10 weight percent of the detergent composition, preferably from 0.2 to 5 weight percent (column 2, lines 25-28). Regarding claims 34-36, the detergent components can be incorporated in detergent compositions of all physical types, such as powders, liquids, gels, and solid bars (column 2, lines 29-31).

The intended use of the Convents et al. dendrimer is to inhibit dye transfer between fabrics during washing (column 1, lines 50-53), however it is inherent that if the same chemical composition is present in equivalent amounts in both detergent compositions (that of Convents et al. and that in the instant application), the diaminobutane core dendrimer would achieve the antiwrinkling properties or ease-of-ironing properties claimed in instant claim 32 and impart hydrophilic functionalities as in instant claim 28.

Claims 18-29 are rejected under 35 U.S.C. 102(b) as being anticipated by Bouquerel et al. (WO/2000/068298). For ease of examination, the Examiner relied upon US Patent 6,872,800 as an equivalent English translation of the French WO publication. All citations henceforth to Bouquerel et al. are locations in the US Patent.

Regarding claims 18 and 19, Bouquerel et al. discloses a composition for dendritic polymers, specifically hyperbranched copolyamides (HBPA) obtained by reaction between monomer (I) of formula  $A-R-B_r$  and monomer (II) of formula  $A'-R'-B'$  or the corresponding lactams (column 3, lines 7-37). A and A' are polymerization reactive functions of a first type, B and B' are polymerization reactive functions of a second type capable of reacting with A and A' respectively, and R is a hydrocarbon based species which optionally comprises heteroatoms (column 3, lines 3-24). One preferred embodiment teaches A having amine functionality, B having carboxylic acid functionality, and R as an aromatic radical (column 5, lines 7-10).

Regarding claim 20, Bouquerel et al. further discloses a composition that can optionally contain two additional monomer structures for control of molecular weight, formula (III) of "core"-type and formula (IV) of "chain-limiting" type (column 4, line 34 to column 5, line 25).

As to claims 18-20, Bouquerel et al. teaches synthesizing the hyperbranched polymers by polycondensation polymerization to produce a functionalized compound based on the hyperbranched copolyamide (column 7, lines 19-25).

As to claims 28 and 29, Bouquerel discloses that the hyperbranched polyamide composition can be used as an additive to modify the hydrophobicity and hydrophilicity of polymer materials (column 9, lines 6-12).

The composition and its preferred monomers or functionalities appear to be identical to the composition claimed in claims 18 and 20.

Bouquerel et al. teaches using this composition primarily as additives in thermoplastic polymer compositions, but extends its applications to the industries of fibre, yarn, and film manufacture in order to modify the thermochemical properties of polyamides or polyesters. Bouquerel et al. teaches synthesizing yarns, fibers, or films with the HBPA composition (column 10, lines 65-67). Bouquerel et al. also teaches that the hyperbranched polymers are useful as supports for crosslinking, detergency, softening, and anti-soiling (hydrophobicity/hydrophilicity) (column 11, lines 1-7).

Bouquerel does not disclose that the composition is used for "washing and/or rinsing, drying ... or ironing textile fibres." However, this limitation is a statement of intended use. In regards to statements of intended use, MPEP 2111.02 states:

During examination, statements in the preamble reciting the purpose or intended use of the claimed invention must be evaluated to determine whether the recited purpose or intended use results in a structural difference (or, in the case of process claims, manipulative difference) between the claimed invention and the prior art. If so, the recitation serves to limit the claim. [MPEP 2111.02 (Citing In re Otto, 312 F.2d 937, 938, 136 USPQ 458, 459 (CCPA 1963))]

In the present case, no structural difference can be discerned between the prior art and the instant invention.

***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 18-36 are rejected under 35 U.S.C. 103(a) as being unpatentable over Bouquerel et al. (WO/2000/068298), and further in view of Randall et al. (US Patent 6,214,786). For ease of examination, the examiner relied upon US Patent 6,872,800 as an equivalent English translation of the French WO publication. All citations henceforth to Bouquerel et al. are locations in the US Patent.

As evidenced above, Bouquerel et al. teaches a dendritic polymer composition formed from monomers via condensation polymerization that appears to be identical to the composition claimed in instant claims 18 and 20.

Bouquerel et al. differs from the present claims by failing to teach the percentage of dendrimer in the laundry detergent composition and the weight average molar mass.

Randall et al. teaches a detergent composition comprised of an amino acid monomer, a copolymerizable compound such as carboxylic acid, and optionally at least one compound consisting of amines, lactams, and more (column 3, lines 27-55). The amino acid based polymers are present in the detergent from about 0.1% to about 10%, and most preferably 0.4% to about 5% by weight in the detergent mixture (column 3, lines 33-39). Randall et al. teaches that the detergent compositions synthesized by the polymer of amino acids, other monomers, and necessary surfactants can be in liquid,

paste or granular form, meeting the requirements of instant claims 34-36 (column 13, lines 33-35).

Furthermore, Randall et al. teaches polymers in the Examples of average molecular weights 3550, 2160, 3150, and 4090, all of which anticipate instant claim 30.

It would have been obvious to one of ordinary skill in the art at the time the invention was made to have combined the composition taught by Bouquerel et al. into a detergent in the amounts taught by Randall et al. since they both teach amine based polymers to enhance the properties of fabrics, such as hydrophilicity or wrinkle resistance.

The recitations of instant claims 18 and 19 can be found in the reference at column 3, lines 5-16 of Bouquerel et al.

The recitations of instant claims 20 can be found in the reference at column 3, lines 17-30, column 4, lines 1-13, and column 4, lines 30-64 of Bouquerel et al.

The recitations of instant claims 21 can be found in the reference at column 4, line 51 of Bouquerel et al.

The recitations of instant claims 22, 23, 25, and 26 can be found in the reference at column 4, lines 22-29 and column 6, lines 12-47 of Bouquerel et al.

The recitations of instant claim 24 can be found in the reference at column 7, lines 26-38 and column 7, line 65 to column 8, line 4 of Bouquerel et al., which teaches sulphonated functions or groups.

The recitation of instant claims 27 can be found in the reference at column 3, lines 17-23 and column 5, line 38 of Bouquerel et al., which teaches caprolactam.



The recitation of instant claims 28 and 29 can be found in the reference at column 7, lines 60-68 of Bouquerel et al., which teaches hydrophilic functionalization.

The recitation of instant claims 30 can be found in the reference in the last sentence of Example I, II, III, and V of Randall et al.

The recitations of instant claims 31 to 36 can be found in the reference at column 3, lines 33-53 of Randall et al.

### ***Conclusion***

Any inquiry concerning this communication or earlier communications from the examiner should be directed to KATIE HAMMER whose telephone number is (571)270-7342. The examiner can normally be reached on Monday to Thursday, 9:00am EST to 7:30pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, David R. Sample can be reached on 571-272-1376. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a

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USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/David R. Sample/  
Supervisory Patent Examiner  
Art Unit 4131

/KLH/